

Contract No. 1-03-23-05
SPECIFICATION NO. 2310-22F-01 (August 2002) - LOW SPEED ELECTRIC VEHICLES

Item Number	Item #1	Item #2	Item #3	Item #4
Vehicle Description	2-Passenger No Bed	4-Passenger No Bed	2-Passenger Short Bed	2-Passenger Long Bed
Make	GEM	GEM	GEM	GEM
Model	E825	E825/4	E825 Utility (Short)	E825 Utility (Long)
Passenger Seating	2-Persons Front Bench	4-Persons Front Buckets/Rear Bench	2-Persons Front Bench	2-Persons Front Bench
Curb Weight	1,100 lb.	1,280 lb.	1,160 lb.	1,240 lb.
GVWR	1,600 lb.	2,100 lb.	1,850 lb.	2,300 lb.
Length	96.5 in.	126 in.	116 in.	144 in.
Width	55 in.	55 in.	55 in.	55 in.
Wheelbase	71.1 in.	101 in.	71.1 in.	101 in.
Bed Dimensions	N/A	N/A	48" Wide x 39" Long	48" Wide x 70" Long
CARB Emission Certification	ZEV	ZEV	ZEV	ZEV
Electric Motor	72-Volt Shunt GE w/Regenerative Braking	72-Volt Shunt GE w/Regenerative Braking	72-Volt Shunt GE w/Regenerative Braking	72-Volt Shunt GE w/Regenerative Braking
Transmission/Drive Line	Front Wheel Drive w/Dana Differential	Front Wheel Drive w/Dana Differential	Front Wheel Drive w/Dana Differential	Front Wheel Drive w/Dana Differential
Vehicle Speeds	12 - 15 MPH Turf 23 - 25 MPH Street	12 - 15 MPH Turf 23 - 25 MPH Street	12 - 15 MPH Turf 23 - 25 MPH Street	12 - 15 MPH Turf 23 - 25 MPH Street
Range	30 Miles	30 Miles	30 Miles	30 Miles
Brakes	Four Wheel Hydraulic	Four Wheel Hydraulic	Four Wheel Hydraulic	Four Wheel Hydraulic
Tires	10" 2-ply street tread	12" 2-ply street tread	12" 2-ply street tread	12" 2-ply street tread
Batteries	(6) 12-Volt Deep Cycle	(6) 12-Volt Deep Cycle	(6) 12-Volt Deep Cycle	(6) 12-Volt Deep Cycle
On Board Charger	Included	Included	Included	Included
Vehicle Lights	Per CVC	Per CVC	Per CVC	Per CVC
Mirrors	Rear View & Dual Exterior	Rear View & Dual Exterior	Rear View & Dual Exterior	Rear View & Dual Exterior
Restraint System	3-Point Safety Belts	3-Point Safety Belts	3-Point Safety Belts	3-Point Safety Belts
Heater	Available	Available	Available	Available
Weather Enclosures (Doors)	Available	Available	Available	Available
Upholstery	Vinyl (Cloth Available)	Vinyl (Cloth Available)	Vinyl (Cloth Available)	Vinyl (Cloth Available)

**Specification for:
Vehicle, Electric, Low Speed
(Zero Emission Vehicle, ZEV)**

SCOPE

This specification covers the State of California minimum requirements for a low speed passenger vehicle (eg: Neighborhood Electric Vehicle, NEV). These vehicles will be primarily used to transport people and light cargo in the State of California on city/county roads with speed limits posted up to 35 mph. Vehicle shall be designed to operate under typical ambient temperatures and weather conditions encountered in the State.

1.0 CLASSIFICATION

Vehicles covered by this specification shall be electric powered and be classified as a zero emission vehicle (ZEV). The classifications used are consistent with those published by the U.S. Government. Vehicles shall meet the minimum criteria pertaining to passenger and cargo capacity as specified below.

<u>Classification</u>	<u>Number of Passengers</u>	<u>Cargo Bed Length</u>
2 passenger	2	N/A
4 passenger	4	N/A
Short Utility	2	48"w x 34"L
Long Utility	2	48"w x 70"L

2.0 SPECIFICATIONS AND STANDARDS

Specifications and standards referenced in this document in effect on the opening of the Invitation for Bid form a part of this specification where referenced. Each vehicle delivered shall be fully compliant with all Federal and State regulations for low speed vehicles (LSVs) in effect as of the date of manufacture.

2.1 Safety: Each vehicle delivered shall conform to the Federal Motor Vehicle Safety Standards (FMVSS) and the California Vehicle Code (CVC) requirements for low speed vehicles (LSVs) in effect as of the date of manufacture.

2.2 Emission Control: Each vehicle shall meet or exceed the Zero Emission Vehicle (ZEV) requirements as established by the California Air Resources Board (CARB) as of the date of manufacture.

3.0 REQUIREMENTS

- 3.1 General Requirements:** Each vehicle shall be new, current model year production and equivalent in style, quality and appointments to those offered to the general public. The vehicles shall be supplied with all equipment and accessories indicated as standard equipment in the manufacturer's published literature.

Bids offering factory fleet delete options intended to meet the minimum requirements of this specification are to indicate the specific delete offered and show the cost of the factory delete on the options page of the Invitation for Bid.

All equipment/options are to be factory installed. If the equipment/options are not available factory installed, dealer installed equipment/accessories may be acceptable. The bidder is to specify items that will be dealer installed.

- 3.2 Motor:** The drive train shall consist of an electric traction motor and may include a gearbox, chain case or comparable type transmission.
- 3.3 Cooling:** The cooling system shall protect the motor and transmission from excessive heat build up during operation in ambient temperatures up to 120°F.

- 3.4 Electrical Equipment:** Each vehicle shall be equipped with a 12-volt electrical accessory system designed to handle the load requirements of the vehicle, equipped with the options specified herein. The battery(s) shall be the maintenance free type with the appropriate capacity as recommended by the manufacturer.

Vehicles may be equipped with a high-voltage electrical system to operate the electric motor but shall revert to a standard 12-volt operating system for all other functions.

- 3.5 Transmission/Driveline:** Each vehicle shall be equipped with the manufacturer's standard automatic type transmission providing a 25 mph maximum forward speed. A reverse mode is also required.

- 3.6 Steering:** Each vehicle shall be equipped with the manufacturer's standard steering. The steering system shall "return to center" when the driver's grip on the steering wheel is relaxed.

- 3.7 Brakes:** Each vehicle shall be equipped with manufacturer's standard four wheel hydraulic brake system with regenerative design. Regenerative brakes shall reclaim, store and reutilize the energy generated during braking of the vehicle. A parking brake shall also be included.

- 3.8 Wheels/Tires:** Each vehicle shall be equipped with the OEM's standard tubeless type tires mounted on approved rims. All four primary tires and wheels shall be identical (i.e., no cross brands or models). Tires shall be the highway tread design and service. All tires shall be properly balanced and mounted so the blackwall side is facing out.

When included on the purchase order, each vehicle shall be supplied with an inflated spare tire and wheel. A donut type, space saving spare is acceptable. Wheel may be shipped loose.

- 3.9 Axle/Springs/Frame:** As required for vehicle GVWR.

- 3.10** **Energy Storage:** Battery capacity shall be adequate to provide a travel distance of not less than 30 miles under normal driving conditions. Batteries shall be 12 volt, commercial, deep cycle design. Each vehicle shall include an on-board charger capable of a full recharge within 8 hours. Charger shall be design to be plugged into a standard 115 VAC "wall" outlet as found in any home/office.
- 3.11** **Air Conditioning & Heater:** No air conditioning is required at this time. A heater/defroster system shall be available as an option if the purchaser requires that feature.
- 3.12** **Body/Cab** Each vehicle shall utilize a purpose built, lightweight body and space-frame which shall include an integral and substantial roll-over type, high-profile roof structure. The vehicle shall be designed and manufactured as a true, dedicated Neighborhood Electric Vehicle (NEV).
- Speed modified golf carts are not acceptable.
- Doors shall be available as an option if the purchaser requires them.
- The utility bed type shall utilize a flat, metal platform with a load capacity of 250 lbs.
- 3.13** **Exterior Color:** The exterior color shall be the manufacturer's standard production colors. Individual vehicle color may vary and should be specified on the purchase order. If the exterior color is not specified, the ordering dealer shall contact the purchase order provider and verify the vehicle color being requested. Bidders shall submit a list of available factory color options with their bids.
- 3.14** **Interior/Seat Upholstery:** Seat upholstery shall be vinyl. Cloth inserts or all cloth upholstery shall be available as an option. If not specified on the purchase order, the interior color shall be the manufacturer's standard color supplied with the exterior color specified.
- 3.15** **Miscellaneous Equipment:** The following items, supplementing if necessary those items already cataloged as standard equipment, shall be furnished and in place:
- Keyed ignition
 - State of charge indicator for propulsion batteries.
 - Arm rests in front compartment (as applicable with doors).
 - Floor mats installed in front and rear.
 - Inside rearview mirror.
 - Outside adjustable rearview mirror(s).
 - Windshield wiper.
 - Standard wheel changing tools and jack adequate to safely lift the vehicle.
 - Owner's/Operation Manual.
- 3.16** **Documents:** The following documents shall be delivered to the consignee (receiving agency) with the vehicle.
- Completed and Signed Pre-Delivery Inspection Checklist, including the P.O. Number and Vehicle I.D.
 - "Line Set Tickets" or "Window Sticker" showing all options installed.

4.0 QUALITY ASSURANCE PROVISIONS

- 4.1 Pre-Delivery Check List:** Prior to delivery, each vehicle shall be completely inspected and serviced by the delivering dealer and/or the manufacturer's pre-delivery service center. A copy of the pre-delivery service checklist shall be completed for each vehicle, signed by a representative of the organization performing the inspection/service and delivered with the vehicle.
- 4.2 Receiving Inspection:** Vehicles ordered for State use will be inspected by a State inspector at the dealer's place of business. Inspection will commence within five (5) working days of notification that vehicles are ready for inspection. Inspection will include: specification compliance, workmanship, appearance and proper operation of all equipment and systems and that all documents are present. In the event deficiencies are detected, the vehicle will be rejected and the delivering dealer will be required to make the necessary repairs, adjustments or replacements. Payment and/or the commencement of a discount period (if applicable) will not be made until the defects are corrected and the vehicle reinspected and accepted.

Completion of inspection or acceptance by the State inspector shall in no way release the dealer from satisfying the requirements of the contract, specifications, and warranty. Deviations from the specified requirements that are detected by the owning agency shall be corrected by the dealer in an expeditious manner at no expense to the owning agency.

5.0 PREPARATION FOR DELIVERY

Delivery of vehicles to the State of California or local agency shall be in accordance with the following provisions.

Caravan or drive-away method of delivery from the factory to a dealer is not acceptable.

Vendors shall insure that vehicles reach their point of delivery with a full charge to the propulsion battery system.

Vehicles delivered from a dealer with more than 15 miles on the odometer will be charged 50 cents for each mile exceeding 15 miles. This charge shall be deducted from the purchase order price for each vehicle delivered against each purchase order. Vehicles delivered with more than 50 miles on the odometer will not be accepted.

6.0 WARRANTY

The manufacturer's regular new vehicle warranty shall apply to each vehicle procured against this specification. This warranty shall be honored by all franchised dealers of the vehicle within the State of California. All warranty certificates and/or cards shall be supplied with each vehicle delivered.

The warranty shall be factory authorized and shall cover not less than 2 years/unlimited miles bumper to bumper, no charge parts and labor (including the battery system), starting from the date the vehicle is placed into service. The receiving agency will notify the dealer of the actual "In-

service" date. All emission related components shall be warranted in compliance with CARB and Federal requirements. Bids offering independent insurance or a statement indicating self-insurance will be deemed non-responsive and will be rejected.

If an additional extended warranty is purchased, a warranty certificate, warranty card, or a statement indicating the extended warranty has been recorded with the manufacturer shall be furnished with each vehicle delivered.

Normal wear items such as tires, belts, hoses, headlamps, light bulbs, brake linings, brake disc/drums, etc., are excluded from warranty coverage. All other items not subject to normal wear or gross operator neglect and abuse, such as propulsion batteries, window, seat or wiper motors, chassis electrical switches (door, trunk lid), paint, hinges, locks, etc., shall be covered.

The IFB will require each vendor to designate by name, his responsible contact and alternate assigned for the duration of the contract who will resolve State warranty related claims on a priority basis.

- 6.1** **"In-Service" Notification:** Vehicles delivered to a receiving agency may not be placed in service immediately upon receipt of vehicle. The receiving agency shall notify the vendor in writing of the actual "in-service" date. This applies during the first 12 months, after which the warranty shall automatically start.